



The State of New Hampshire
Department of Environmental Services



Michael P. Nolin
Commissioner

To: Landscape and Irrigation Professionals

From: Joy EH Perkins, Asbestos Management & Control Program
Air Resources Division

Date: 14-November-2005

Re: Inactive Asbestos Disposal Sites

The New Hampshire Department of Environmental Services (DES) and the statewide Asbestos Abatement Advisory Committee want to inform you about the health risks associated with buried or exposed asbestos waste.

Did you know that:

- Asbestos waste material can look like rich fertile soil and can be found in different colors, sizes, and shapes?
- Asbestos waste material is buried throughout the greater Nashua/Hudson area, and material has also been found in Hollis, Tilton, and Salem?
- Disturbing asbestos material during landscaping, excavation, mowing and plowing activities can expose workers to asbestos fibers that have been released into the air or have contaminated clothing and equipment?
- Exposure to asbestos can lead to long-term health effects like lung cancer, mesothelioma, and asbestosis?

DES has identified over 300 inactive asbestos waste disposal sites throughout the greater Nashua/Hudson area and new sites are being discovered every year. These sites include residential, commercial, industrial, and public lands. Please read the enclosed fact sheet titled "Asbestos Waste Disposal Sites in Nashua/Hudson, NH" and visit the DES web site at http://des.nh.gov/sw/asbestos_1.htm for further information concerning the asbestos waste disposal program.

Worker health and safety is of utmost concern when working in or around asbestos. DES and the health departments of Nashua and Hudson maintain a list of known inactive asbestos waste disposal sites for your review. You should review these lists and take appropriate actions to ensure the health and safety of your workers during all of your work activities.

For further information on inactive asbestos disposal sites, please contact Mark Ledgard of the DES Waste Management Division at (603) 271-7376, or me at (603) 271-4609.

Thank you for your attention to this matter.

Enclosure: Fact sheet #ASB-11, "Asbestos Waste Disposal Site in Nashua/Hudson, N.H."

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ASB-11

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Asbestos Waste Disposal Sites in Nashua/Hudson, N.H.

What is asbestos?

Asbestos is a non-conducting, non-combustible, fibered mineral, which was used in this country to produce a variety of commercial and industrial products, beginning around 1880 and ending about 100 years later after health concerns became associated with the material.

What are the health concerns associated with asbestos?

The inhalation of asbestos fibers is known to cause respiratory disease and cancer in humans. Asbestosis, mesothelioma, and lung cancer are each associated with asbestos exposure. Those diseases are physically debilitating and typically lead to death. Generally speaking, the symptoms of asbestos-caused diseases do not appear until 10 to 35 years after exposure.

How was asbestos used in the Nashua/Hudson area of New Hampshire?

In Nashua, the Johns-Manville Corporation produced asbestos-containing building materials over a period of about 100 years. During that time, the company delivered its asbestos waste material, free of charge, to area property owners for use in filling low lying areas. As a result, many properties in Nashua and the nearby community of Hudson are now filled with asbestos waste. To date, over 250 asbestos disposal sites have been identified in Nashua and Hudson, and new sites are being periodically discovered. The sites include residential, commercial, industrial and public lands, both developed and undeveloped.

What does asbestos manufacturing waste look like?

Asbestos manufacturing waste from the Johns-Manville plant in Nashua typically exists in the following forms: pellets, spheres, whole sheets (4' x 8") and scraps/fragments of sheets resembling "cement board", rolled sheets, rolled paper, dewatered sludge, and waste from dust collection systems, referred to as "baghouse" waste. The waste comes in a variety of colors, including gray, white, black, green, and red. After being in the soil for many years, it has a tendency to blend with its surroundings and can be hard to distinguish from clean soil. This is most often the case with "baghouse" waste, which is a fine, dust-like material similar to soil particles.

Are all forms of asbestos waste considered a risk?

Yes. But the degree of risk will vary, depending on the potential for the material to release fibers. Asbestos material that can be crushed, pulverized or reduced to powder by hand

pressure, when dry, is referred to as *friable* asbestos. Asbestos material that does not crush or pulverize under hand pressure, when dry, is referred to as *non-friable* asbestos. Friable asbestos is of greatest concern, because it has the potential to release fibers to air and surrounding surfaces where it may result in a human exposure.

Is there friable asbestos material at the asbestos disposal sites in Nashua and Hudson?

Yes, asbestos disposal sites in New Hampshire contain both friable and non-friable asbestos materials. In addition, it is important to understand that non-friable asbestos material will often break down and become friable after it has remained outdoors and exposed to the elements for many years.

How can the risk of exposure be minimized at asbestos disposal sites?

Each site is unique and there is no "one size fits all" solution to stabilizing and maintaining sites. Generally speaking, asbestos can be safely and permanently disposed by burying it under enough clean soil to prevent it from resurfacing. In the Nashua/Hudson area, at least 2 feet of soil cover is recommended to prevent the material from resurfacing over a period of years due to frost action. Lesser depths can be considered when the cover materials are engineered to incorporate a geotextile barrier that will prevent the waste from resurfacing and reduce the risk of inadvertently digging into the material. The surface of the cover soils must also be protected to prevent erosion and withstand anticipated land use activities at the site. This can be accomplished, in part, by properly grading the surface to control runoff, the primary cause of erosion, and by planting shallow-rooted vegetation, such as grass. Depending on the land-use setting, asphalt or concrete may also be appropriate surface treatments. In all cases, land use activities at the site must be controlled so that the cover materials will maintain their integrity and the underlying asbestos waste will not be knowingly or unknowingly disturbed.

What is the Department of Environmental Services (DES) doing to help solve the problem?

The DES implements a program that is dedicated to assuring proper management of asbestos disposal sites. Program elements include: investigation/confirmation of newly reported sites; periodic inspection of known sites; technical assistance for developing/implementing emergency response and remedial action plans for sites that need to be covered; activities pertaining to long-term maintenance of sites; and coordination of activities with the U.S. Environmental Protection Agency (US-EPA).

The DES program relies on maintaining strong partnerships with local officials, property owners, and federal environmental officials. At the present time, DES is evaluating measures to further strengthen those partnerships and establish a clear framework within which to manage the problems at hand and assure long-term protection of the public health.

Are there regulations that apply to managing asbestos disposal sites?

Yes, there are many state and federal regulations that apply to managing asbestos disposal sites. The regulations include requirements for covering the sites; monitoring and maintaining the cover; recording notice in the property chain-of-title; notifying other parties, including tenants, contractors, and others who might have occasion to disturb the material; obtaining DES approval before excavating or otherwise disturbing the waste; using

licensed/qualified persons only to perform the work; properly containing and labeling the waste before removing it from a site; and a range of other requirements for shipping, transportation, and off-site disposal.

Where can I obtain more information?

For additional information, please contact:

**New Hampshire Department of Environmental Services
Waste Management Division
29 Hazen Drive, P.O. Box 95, Concord, NH , 03301
telephone: 603-271-2925 FAX: 603-271-2456
TDD Access: Relay NH 1-800-735-2964**

Also refer to a document titled "*Guidance for Managing Asbestos Disposal Sites*", published by DES. It is available, free of charge, on the DES website at www.des.state.nh.us/asbestosguidance. Reference copies have also been provided to the public libraries in both Nashua and Hudson. In addition, copies can be purchased from the DES Public Information Center, by contacting them at the address shown above or by telephone at 603-271-2975. The cost of the publication is \$15.